In the Claims

Please amend the claims as follows:

1 (currently amended). A method for obtaining and analyzing multi-dimensional in vivo images of blood perfusion through a targeted body region, comprising:

a) providing computer-executable software operably configured to receive electronic signals via electronic communication means, said software being programmed to translate the electronic signals into electronic data, and to calculate and format the electronic data into visually-perceivable displays~~, said software being programmed to automatically eliminate baseline data from the electronic data prior to development of such visually-perceivable displays~~;

b) providing an ultrasonic imaging device for generating the electronic signals representing corresponding ultrasonic image characteristics, said imaging device being operably coupled to said communication means for operably transmitting the electronic image signals therethrough;

c) injecting an echocontrast material into a targeted body region;

d) conducting a plurality of scans of ~~scanning~~ said body region with said ultrasonic imaging device in one or more predefined time periods, said plurality of scans each obtaining reflection energy intensity data at a plurality of positions in the targeted body region, such that a plurality of reflection energy intensity data points are obtained for each of said plurality of positions;

e) calculating a statistical median reflection energy intensity value among said plurality of reflection

energy intensity data points for respective ones of said plurality of positions;

f) generating an electronic image of said body region based on said median reflection energy intensity values; and

g) ~~e)~~ displaying said electronic image ~~images~~ of said body region on a viewable screen, said electronic image ~~images~~ representing a multi-dimensional view of said body region, with said multi-dimensional view being automatically divided into a plurality of user-defined cross-sectional segment views graphically representing the entire body region ~~segments~~ for detailed analysis thereof.

2 (currently amended). A method as in Claim 1 wherein said software is programmed to calculate individual body region position reflection energy ~~pixel~~ intensity change over said time periods.

3 (currently amended). A method as in Claim 1 wherein said software is programmed to calculate overall reflection energy intensity change over said time periods for each respective said segment.

4 (original). A method as in Claim 1 wherein said software is programmed to display a plurality of selected said multi-dimensional views obtained at distinct predetermined time periods.

5 (original). A method as in Claim 4 wherein said software is programmed to calculate and display a relative data set reflecting changes in multi-dimensional view characteristics between said distinct predetermined time periods.

6 (original). A method as in Claim 5 wherein said distinct time periods include before and after medical treatment.

7 (cancelled).

8 (currently amended). A method as in Claim 1 ~~7~~ wherein said software is programmed to automatically determine size and location of a perfusion defect area, and to automatically compare data from respective corresponding perfusion defect areas.

9 (currently amended). A method as in Claim 1 wherein said automatic segmentation of a myocardial region optionally includes ~~may be selectively defined with or without~~ subendocardial/subepicardial division.

10 (cancelled).

11 (currently amended). A method as in Claim 1 ~~10~~ wherein said calculated electronic data is obtained throughout respective said predefined time periods, and is displayed as one or more time-intensity curves.

12 (original). A method as in Claim 11 wherein said software is programmed to selectively simultaneously display a plurality of time-intensity curves from one or more user-defined segments imaged in one or more said time periods.

13 (currently amended). A method as in Claim 1 wherein said user-defined segments are compared to one another for respective reflection energy intensities at given scan times, with said segments being automatically relatively color-coded to illustrate relative perfusion characteristics among said plurality of segments ~~color-coded~~.

14 (currently amended). A method as in Claim 1 wherein said ultrasonic imaging device is an ultrasonic transducer.

15 (original). A method as in Claim 1 wherein said imaging device is coupled to a catheter device.

16 (original). A method as in Claim 15 wherein said imaging device is positioned adjacent said body region within a respective body vasculature.

17 (original). A method as in Claim 1 wherein said body region is at least a portion of the myocardium.

18-25 (cancelled).